GREAT BASIN RESOURCE WATCH

Working with Communities to Protect Their Land Air and Water

P.O. Box 207 Reno, NV 89504
775-348-1986, www.gbrw.org

December 20. 2016

Jeryl R. Gardner, P.E., C.E.M.
NDEP Anaconda Mine PM
901 S. Stewart St., Suite 4001
Carson City, NV 8970

VIA email: jgardner@ndep.nv.gov

Re: *Proposed Plan to clean up the Former Arimetco operations (OU-8) portion of the Anaconda Copper Mine Site (Site) located in Lyon County, near Yerington, Nevada.*

Dear Mr. Gardner,

Great Basin Resource Watch has reviewed Proposed Plan to cleanup Operable Unit 8 (OU-8). Alternative 4 is in our view the best and really only option that was presented at the December 12, 2016 public hearing in Yerington, NV for remediation of the Arimetco portion of the Anaconda Mine site. However, we do see significant deficiencies in this alternative, and strongly recommend and additional alternative added that is more in line with Alternative 8 in the draft and final feasibility studies.[1]

Even though the average annual precipitation is low for the Yerington area significant torrential precipitation events often occur, which can result in infiltration into the HLP's. In addition, snowfall is common, also resulting in a springtime infiltration. Containment of the toxins in the HLP's is essential for the long-term public health of the Yerington area.

Given the level of contamination present in the drain down fluids from the Heap Leach Pads (HLP) it is essential that best effort are made to cap the entire surface and prevent water infiltration through the pads that could eventually reach groundwater. The "Proposed Plan for Operable Unit 8" states, "Although the cover is a minimum of 2 feet thick, the thickness is consistent with the current practices for HLP closure in Nevada and is considered effective and permanent."[2] GBRW acknowledges that a 2 foot cover is sufficient at many mine sites in Nevada where reclamation involves a much less toxic facility, but in the case of the anaconda HLP's the 2 foot cover for the Heap Leach Pads (HLP) is woefully inadequate. The Great Basin plants tend to develop quite deep root systems seeking water. Only the most superficial grasses will not penetrate below 2 feet. Due to the severe toxicity of the OU-8 HLP's it is important that plants minimally or do not penetrate below the cover material layer.

A stable plant community is critical to the long-term reclamation of the HLP's. As such a variety of grasses and brush will need to be established including include sage and rabbit brush, for example, which are deep rooted plants. Many of the desired plants will most likely penetrate below the 2 foot cover and either die due to low pH conditions or excessive uptake of soluble toxins. Those plants

that do penetrate the cover and survive will then draw these toxins from the HLP resulting in widening the contamination zone through seed and plant mater dissemination from wind or uptake by foraging animals. GBRW even questions whether 4 feet cover will be sufficient, since Great Basin phreatophytes will tap deeper that this.

There seemed to be a change in the analysis from 2011 to 2016. The draft feasibility study only analyzed 4 foot cover/capping, where as in the more recent analysis a hybrid alterative, 6a/8a, was proposed that reduced the cover to 2 feet, which clearly represents a lower level of reclamation and is less protective. In terms of "Overall Protection of Human Health and the Environment" the draft and final feasibility studies state that, "The degree of protectiveness for Alternative 8 is considered to be higher than the other alternatives."[3] Thus, this alternative should have been presented to the public, and a clarification as to why Alternative 8 is not preferred. The final feasibility study does indicate that cost maybe the reason for dropping alternative 8, which states, "Based on the stated RAOs/GRAs, implementation of a combination of Alternatives 6 and 8 to facilitate diversion of as much precipitation from the heap leach pad fluid management systems as possible is the most effective way to reduce draindown flows and associated management costs."[4] Given that the clean-up of OU-8 will be with public dollars for public protection, the public should be given the details so it can weigh in on whether the additional costs associated with a thicker cover is worthwhile.

GBRW is also concerned that there is no overall stormwater plan for the entire site. We support a system to help direct precipitation from off the HLP's and other facilities, but it should be part of an integrated stormwater management plan.

If you have any question feel free to contact us, and we look forward to clean up activities at the Anaconda site.

Sincerely,

John Hadder,
Executive Director

Bob Fulkerson, Progressive Leadership Alliance of Nevada
Executive Director

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[1] a) U.S. Environmental Protection Agency, Region 9, "Draft Final Feasibility Study for Arimetco Facilities Operable Unit 8 Heap Leach Pads and Drain down Fluids, Anaconda Yerington Copper Mine Yerington Nevada," May 2012; b) "FINAL FEASIBILITY STUDY FOR ARIMETCO FACILITIES Operable Unit 8 Heap Leach Pads and Drain-down Fluids Anaconda Copper Mine Lyon County, Nevada, October 2016.

[2] EPA, NDEP, BLM "Proposed Plan for Operable Unit 8," November 2016, p.13. http://ndep.nv.gov/bca/anaconda.htm

[3] Final Feasibility Study (ref 1b), p. 5-24.

[4] Final Feasibility Study (ref 1b), Appendix E, p. 16.